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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/926,592	09/04/1997	SHUNPEI YAMAZAKI	0756-1717	7227

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EXAMINER

PERT, EVAN T

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/926,592

Applicant(s)

YAMAZAKI, SHUNPEI

Examiner

Evan Pert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 28 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 13, 16, 17 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 16, 17 and 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper Note(s) _____

6) ☐ Other _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13, 16-17, and 21-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite because of the ill-defined claim term "providing" with respect to what happens to "a pair of first and second electrodes" in the claimed method. Applicant argues that the RCE amendment (resulting in the pending application) changing "preparing" to "providing" changes the scope of all the claims [paper 7, paragraph no. 3].

However, the examiner is confused about the difference in scope of "preparing" as compared to "providing" in view of the written description of the specification itself. One could not merely "provide" the electrodes without "preparing" the electrodes, or the claimed method (invention) wouldn't work. The meaning of "preparing" and/or "providing" in the context of the specification is to place the electrodes in a reaction chamber arranged parallel and opposing. Nothing particular is disclosed about "preparing" as compared to "providing".

For purposes of examination, then, the meaning of "preparing" and "providing" in the claims is patentably insignificant and UNCLEAR in scope because all the claims necessarily require acts of "preparing" and "providing" electrodes for the claimed invention to work.

For example, the claimed act of "exciting" with the electrodes necessarily includes some act of both preparation and provision.

How is it possible to successfully practice the invention by merely "providing" electrodes without "preparing" the electrodes? If an electrode pair needs to work to perform an act of "exciting", doesn't that electrode pair need to somehow be "prepared"?

What does "providing" mean that "preparing" does not, in the context of applicant's working *claimed* invention?

What is actually going on to cause the electrode pair to be able to "excite" in the claimed method when they supposedly could be "provided" *without* being "prepared"?

Applicant's specification in view of the record leaves one wondering what the "preparing" versus "providing" issue of infringement is about [p. 47, page 2, paragraph 3]. As best understood by the examiner, there can be no difference between claims of "providing" and "preparing" an electrode pair in this case because all of the pending claims require "exciting" with the electrode pair which means they work which means they were prepared.

Claim Rejections - 35 USC § 103

2. Claims 13, 16, 17, 21, 23-26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (U.S. Patent 4,563,367) for reasons of record in paper no. 45, item 2.

3. Claims 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman as applied to claims 21 and 26 above, and further in view of Tanaka et al. (U.S. 4,525,381) for reasons of record in paper no. 45, item 3.

Response to Arguments

4. Applicant's arguments are not found persuasive. Applicant argues that the Sherman reference fails to disclose that cleaning gas is introduced in pipe 47, required for rejection of the claims, even though the Fig. 4 shows the pipe 47 connected to etching (cleaning) gas along with deposition gasses as well.

Applicant argues that while Sherman shows cleaning gas pipeline 47 connected to the upper (second) (other) electrode of the exciting electrode pair, Sherman's *text* supposedly teaches away. Applicant emphasizes that Sherman describes "a number of gas storage tanks...which supply *deposition* as to line 47." [col. 3, lines 41-43, emphasis added].

While the *text* of Sherman does not disclose a cleaning gas pathway directly to the upper (second) (other) electrode, the Fig. 4 of Sherman explicitly shows "etching gas" which is referred to as "cleaning gas" or " NF_3 " in Sherman's specification.

Sherman has improved the cleaning of deposition chambers and shows the system of Fig. 4 as an example with the inventive small chamber 30 for introducing gas *more efficiently*.

The apparatus of Fig. 4 is actually shown with Sherman's inventive chamber 30 inside a known apparatus with electrode pair 23/25A having (upper) (other) (second) electrode 25A clearly connected to cleaning gas, the less efficient and pre-Sherman way of introducing certain gas.

Therefore, applicant's arguments of "teaching away" are based on text describing Sherman's *improvement* while at the same time ignoring disclosure of the background of the improved apparatus and depictions of these apparatus in the figures themselves.

In the background (col. 3, lines 18-58), Sherman explains that all reactors in general are subject to unwanted deposits that can be plasma cleaned by exciting a pair of electrodes. Since the apparatus of Fig. 4 shows the electrode pair having a path of cleaning and deposition gas to both electrodes, one of ordinary skill in the art would have been motivated to introduce the cleaning and/or deposition gas through the upper or lower, or both, depending on where the dirty parts were observed.

Therefore, the Sherman reference itself provides motivation to introduce cleaning gas anywhere deposition gas is introduced, as described in the background. One is motivated to introduce the cleaning gas where the dirty parts are, to clean the dirty parts.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Pert whose telephone number is 703-306-5689. The examiner can normally be reached on M-F (7:30AM-3:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 703-308-1233. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.

ETP
July 9, 2003


EVAN PERT